From: "Coffey, Scott" <CoffeySE@cdmsmith.com>
To: "Zhen, Davis" <Zhen.Davis@epa.gov>
"Sheldrake, Sean" <sheldrake.sean@epa.gov>
CC: "Trump, Julee M." <trumpjm@cdmsmith.com>
younghs@cdmsmith.com
"Greazel, Andrew" <GreazelAD@cdmsmith.com>
"Blischke, Eric" <blischkee@cdmsmith.com>
"John Kern" (b) (6)
Date: 4/19/2018 9:48:12 AM
Subject: RE: I'm on a call -- email me if that helps - Deliberative

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Ok. Thanks John.

Davis/Sean: As much as I hate to say this, **I think we're in a stop work situation** until the Pre-RD Group can obtain a bigger/better piece of equipment to get better penetration. I do have a couple alternatives to shut-down for your consideration below.

I realize you need some back-up information to support a stop work order, so I'm going to ask **Howard and Julee to prioritize preparing a summary of the locations we've recorded to-date that have had difficulties meeting penetration depth at the primary locations and skipped over sampling harder sediment**. Maybe the percentage of these samples collected to-date is low, but we can't keep this going due to (as John points out below) the equipment biases that creeping in.

Of course, we've asked the Pre-RD Group to provide us a table with samples collected to-date and information on sample location moves to contingency/alternate locations (due to hard sediment refusal), but I don't think we can wait for this, as I'm estimating they're close to getting half way through the randomized sampling locations.

Alternatives to complete shut-down (for EPA review/consideration)

A possible alternative to shutting them down outright is to allow them to continue sampling but not immediately abandon locations with only one or two attempts at penetrating the hardened sediment in the primary location. This will require a step-up in our oversight to ensure this is being done and creates some possible oversight budget issues for us in the back end, but it's an alternative to shutting them down until they get the better sampler.

Another alternative (I mentioned this yesterday at the end of our porewater call, but Sean had left): Document their abandoned attempts at the primary locations and require them to resample these locations later with a more robust sampler, or target these primary random locations for Coring (it means they may need to move planned, or add core locations) and the core sample at the surface becomes the firm sediment sample in the randomized primary location.

Let me know if you want to discuss further, or have any questions about my alternatives to shutting them down until they obtain a sampler that can penetrate the harder sediment.

Scott

From: John Kern (b) (6)
Sent: Thursday, April 19, 2018 9:20 AM
To: Coffey, Scott <CoffeySE@cdmsmith.com>
Cc: Trump, Julee M. <trumpjm@cdmsmith.com>; Young, Howard S. <younghs@cdmsmith.com>; Greazel, Andrew <GreazelAD@cdmsmith.com>; Sheldrake, Sean <sheldrake.sean@epa.gov>; Zhen, Davis <Zhen.Davis@epa.gov>; Blischke, Eric <blischkee@cdmsmith.com>
Subject: Re: I'm on a call -- email me if that helps

Bigger sampler?

If we think there is a better piece of equipment, I'd support that to a degree, except that we start to have more

equipment biases creeping in, within the study spatially, and across time steps which will get in the way for temporal comparisons in the future.

that said if we can develop a piece of equipment that can be held constant into the future, this would be as good a time as any to experiment with equipment to figure that out. It will compromise these data to a degree, but may pay off in being able to standardize in the future.

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On Thu, Apr 19, 2018 at 11:38 AM, Coffey, Scott <CoffeySE@cdmsmith.com> wrote:

> Ok. I'll try to articulate it in an email:
>
> As you know, the Pre-RD Group is currently 3 weeks into their surface sediment sampling and I think we've mentioned previously that they've had some difficulty reaching minimum penetration depths in Primary locations. They sampled some of these locations anyway, but now that we've kind of made an issue out of their lack of meeting penetration depths and the field crew is getting pressure to speed up as they are falling behind schedule, they are appearing to take less time trying to get that sample in the tighter sediment (maybe one attempt as opposed to numerous attempts) and immediately move to contingency locations where softer sediment is found.
>
> While they are still within the radius bounds of the primary location, they're hunting more actively for softer sediment rather than trying to get full penetration in more hardened sediment locations. As a result, we're a bit worried there are some biases developing in the sampling if they are just hunting for **soft sediment** despite it being within the primary randomized location. They've added weights to their hydro-punch (sp?)/van veen sampler, but we're wondering if we need to direct them to use something bigger if you feel that passing up these more hardened sediment locations isn't a good idea.
>
> Would greatly appreciate your thoughts on this.
>
> Thanks!
> Scott
>
> **From:** John Kern (b) (6)
> **Sent:** Thursday, April 19, 2018 8:25 AM
> **To:** Coffey, Scott <CoffeySE@cdmsmith.com>
> **Subject:** I'm on a call -- email me if that helps
>
> John W. Kern PhD
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